

What Is Claimed Is:

1. A method of providing local anesthesia to a mammal, comprising:

5 (a) administering to said mammal in need thereof an anesthetic agent and an alpha adrenergic receptor agonist to the site to be anesthetized, wherein said anesthetic agent is administered in an amount effective to provide local anesthesia and said alpha adrenergic receptor agonist is administered in an amount effective to constrict the blood vessels at the site and prolong the local anesthesia, and then

10 (b) administering a low dose of an alpha adrenergic receptor antagonist to said site to reduce the prolongation.

2. The method according to claim 1, wherein anesthetic agent and alpha adrenergic receptor agonist are administered together in solution.

15 3. The method according to claim 2, wherein said solution is administered by injection into the site.

20 4. The method according to claim 1, wherein the anesthetic agent and alpha adrenergic receptor agonist are administered together in solution from a carpule, by injection into the site.

25 5. The method according to claim 1, wherein said anesthetic agent is selected from the group consisting of lidocaine, polocaine, etidocaine, lignocaine, xylocaine, novacaine, carbocaine, procaine, prilocaine, bupivacaine, cinchocaine and mepivacaine.

30 6. The method according to claim 1, wherein the alpha adrenergic receptor agonist is a catecholamine or a catecholamine derivative.

7. The method according to claim 6, wherein the alpha adrenergic receptor agonist is levonordefrin, epinephrine or norepinephrine.

8. The method according to claim 1, wherein said alpha adrenergic receptor antagonist is selected from the group consisting of phentolamine, phentolamine hydrochloride, phentolamine mesylate, tolazoline, yohimbine, rauwolscine, doxazosine, labetolol, prazosine, tetrazosine and trimazosine.

5

9. The method of claim 1, wherein said alpha adrenergic receptor antagonist is administered at a concentration of from about 0.001 mg/ml to about 0.25 mg/ml.

10

10. The method of claim 1, wherein at or below about 0.25 mg of said alpha adrenergic receptor antagonist is administered.

11. The method of claim 1, wherein about 0.08 mg of said alpha adrenergic receptor antagonist is administered.

15

12. The method according to claim 1, wherein the alpha adrenergic receptor antagonist is administered in solution from a carpule, by injection into the site.

20

13. The method according to claim 1, wherein said alpha adrenergic receptor antagonist is administered topically to the site.

14. A method of providing local anesthesia to a human, comprising:

25

(a) administering to said human in need thereof by injection to the site to be anesthetized a solution comprising polocaine and levonordefrin, wherein said polocaine is administered in an amount effective to provide local anesthesia and said levonordefrin is administered in an amount effective to constrict the blood vessels at the site and prolong the local anesthesia, thereby producing local anesthesia at said site,

30

(b) carrying out a medical procedure on said human, and then

(c) administering about 0.08 mg of phentolamine mesylate at said site at a concentration of about 0.05 mg/ml to reduce the prolongation.

15. The method according to claim 14, wherein anesthetic agent, alpha adrenergic receptor agonist, and alpha adrenergic receptor antagonist are administered in solution from a carpule, by injection into the site.

5 16. A method of enhancing the survival of a tissue graft, comprising

(a) administering to a mammal undergoing a tissue graft an anesthetic agent and an alpha adrenergic receptor agonist to the site of the tissue graft, wherein said anesthetic agent is administered in an amount effective to provide local anesthesia and said alpha adrenergic receptor agonist is administered in an amount effective to constrict the blood vessels at the site and prolong the local anesthesia,

(b) performing the tissue graft procedure, and then

(c) administering an alpha adrenergic receptor antagonist to said site to reduce the prolongation and enhance the tissue graft survival.

17. The method of claim 16, wherein said tissue graft is a hair graft.

18. The method of claim 16, wherein a low dose of alpha adrenergic receptor antagonist is administered to the site

19. The method of claim 16, further comprising

(d) administering hyaluronidase to the site after the tissue graft procedure.

20. The method of claim 19, wherein said hyaluronidase is administered by injection and wherein said hair graft is a hair flap.

21. A method of providing a regional anesthetic block to a mammal, comprising:

(a) administering to the mammal in need thereof an anesthetic agent and an alpha adrenergic receptor agonist in the site to receive the anesthetic block, wherein said anesthetic agent is administered in an amount effective to provide local anesthesia and said alpha adrenergic receptor agonist

is administered in an amount effective to constrict the blood vessels in the site and prolong the anesthetic block, and then

(b) administering an alpha adrenergic receptor antagonist to said site to reduce the prolongation.

5

22. The method of claim 21, wherein a low dose of the alpha adrenergic receptor antagonist is administered.

23. The method of claim 21, wherein said site is the epidural space.

10

24. A kit comprising a carrier means having in close confinement therein two or more container means, wherein a first container means contains an anesthetic agent and optionally an alpha adrenergic receptor agonist and a second container means contains a low dose of an alpha adrenergic receptor antagonist.

15

25. The kit of claim 24, wherein said anesthetic agent and said alpha adrenergic receptor agonist are in said first container means.

20

26. The kit of claim 24, wherein said anesthetic agent and said alpha adrenergic receptor agonist are in separate container means.

27. The kit of claim 24, wherein said container means is a carpule.

25

28. The kit of claim 24, wherein said anesthetic agent is polocaine, said adrenergic receptor agonist is levonordefrin, and said alpha adrenergic receptor antagonist is phentolamine mesylate.

30

29. The kit of claim 24, wherein said alpha adrenergic receptor antagonist is phentolamine mesylate at a dose of about or less than 0.25 mg.

30. The kit of claim 24, wherein said alpha adrenergic receptor antagonist is phentolamine mesylate at a dose of about 0.08 mg.

31. The kit of claim 24, further comprising a container means containing hyaluronidase.

5 32. The kit of claim 24, wherein said container means containing said alpha adrenergic receptor antagonist further comprises hyaluronidase.